Appln. No.: 10/549,423
Amendment Dated August 13, 2010
Reply to Office Action of May 21, 2010

MAT-8749US

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1.   (Currently Amended) A revocation information transmission method used in a system including a plurality of contents transmitting devices for transmitting contents, and a plurality of contents receiving devices for receiving contents on a network, the method comprising the steps of:

executing mutual authentication between the plurality of contents transmitting devices and the plurality of contents receiving devices, respectively, each of the contents transmitting devices reading authentication information of a respective one of the contents receiving devices;

individually uploading revocation information including key information of mutual authentication failure from each of the contents transmitting devices or each of the contents receiving devices in case of mutual authentication failure to a revocation integrator that is separate from the plurality of contents transmitting devices and the plurality of contents receiving devices;

integrating, with the revocation integrator, the revocation information from each of the contents transmitting devices with the revocation information from each of the contents transmitting devices, as an integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network;

packetizing the integrated revocation list and multiplexing the packetized revocation list into a stream; and

transmitting the stream to the contents transmitting devices on the network;

wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a data structure of a section of the MPEG transport stream.

2.-3.   (Cancelled)

4.   (Previously Presented) The revocation information transmission method of claim 1, wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a data structure of a PES packet of the MPEG transport stream.

5.   (Previously Presented) The revocation information transmission method of claim 1, wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a payload of a transport packet of the MPEG transport stream.

6.   (Previously Presented) The revocation information transmission method of claim 1, wherein the integrated revocation list is transmitted by using an IP packet.

7.-8.   (Cancelled)

9.   (Currently Amended) A revocation information transmitting system comprising:

a plurality of contents transmitting devices for transmitting contents;

a plurality of contents receiving devices for receiving contents, which are respectively connected to the plurality of contents transmitting devices;

a first digital interface for outputting a compressed/expanded digital signal from the contents transmitting device to the contents receiving device;

a second digital interface for transmitting and receiving authentication information of the contents receiving device between the contents transmitting device and the contents receiving device;

a network for ~~sucking up~~ receiving revocation information from the plurality of contents transmitting devices or the plurality of contents receiving devices in case of mutual authentication failure between the contents transmitting devices and contents receiving devices;

an integrator that is separate from the plurality of contents transmitting devices and the plurality of contents receiving devices that integrates ~~integrating means for integrating~~ the revocation information, as an integrated revocation list from the contents transmitting devices or the contents receiving devices, which is connected to the network, the integrated revocation

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list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network;

a multiplexer that multiplexes ~~multiplexing means for packetizing~~ the integrated revocation list integrated by the ~~integrating means and multiplexing~~ integrator and multiplexes it into a stream; and

a transmitter that transmits ~~transmitting means for transmitting~~ the stream,

wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a data structure of a section of the MPEG transport stream.

10.-11. (Cancelled)

12.   (Previously Presented) The revocation information transmitting apparatus of claim 9, wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a data structure of a PES packet of the MPEG transport stream.

13.   (Previously Presented) The revocation information transmitting apparatus of claim 9, wherein the stream is an MPEG transport stream, and the integrated revocation list is transmitted by using a payload of a transport packet of the MPEG transport stream.

14.   (Previously Presented) The revocation information transmitting apparatus of claim 9, wherein the integrated revocation list is transmitted by using an IP packet.

15.-16. (Cancelled)

17.   (Currently Amended) A revocation information transmission method comprising the steps of:

executing mutual authentication between contents transmitting equipment and contents receiving equipment, executed by the contents transmitting equipment which reads authentication information of the contents receiving equipment through a first digital interface; and

outputting revocation information including key information of mutual authentication failure from the contents transmitting equipment or the contents receiving equipment in case of mutual authentication failure,

wherein the revocation information transmission method is used in a system comprising contents transmitting equipment for transmitting contents, contents receiving equipment for receiving contents, a second digital interface for outputting compressed/expanded digital signal from the contents transmitting equipment to the contents receiving equipment, the first digital interface connecting means for transmitting and receiving data between and connecting the contents transmitting equipment to the contents receiving equipment, and a revocation integrator that is separate from the contents transmitting equipment and the contents receiving equipment integrating the revocation information, as an integrated revocation list from the contents transmitting devices or the contents receiving devices, which is connected to the network, the integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network,

wherein the integrated revocation list is transmitted from the revocation integrator to the contents transmitting devices using a data structure of a section of an MPEG transport stream.

18.   (Currently Amended) A revocation information managing apparatus comprising:

a plurality of contents transmitting equipments, connected to a network, for transmitting contents;

a plurality of contents receiving equipments, connected to a network, for receiving contents, which are respectively connected to the plurality of contents transmitting equipments;

a first digital interface for outputting compressed/expanded digital signal from the contents transmitting equipment to the contents receiving equipment;

a second digital interface ~~connecting means~~ for transmitting and receiving authentication information of the contents receiving apparatus between ~~connecting~~ the contents transmitting equipment ~~to the~~and the contents receiving equipment;

~~a means for executing mutual authentication between the contents transmitting equipment and the contents receiving equipment; and~~

an ~~outputting means~~ output for outputting revocation information including key information of mutual authentication failure from the contents transmitting equipment or the

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contents receiving equipment in case of failure in thein a mutual authentication between the contents transmitting equipment and the contents receiving equipment; and

a receiving means receiver for receiving an integrated revocation list from a revocation integrator that is separate from the plurality of contents transmitting equipment and the plurality of contents receiving equipment, the integrated revocation list representing a common list of revocations for the contents receiving equipment and the contents transmitting equipment on the network,

wherein the integrated revocation list is transmitted from the revocation integrator to the receiving means using a data structure of a section of an MPEG transport stream.

19. (Previously Presented) The revocation information transmission method of claim 1, wherein:

one of the contents transmitting devices, as a first contents transmitting device includes a first digital interface for outputting a compressed/expanded digital signal to a respective one of the contents receiving device, as a first contents receiving device and a second digital interface for executing the mutual authentication between the first contents transmitting device and the first contents receiving device, the method further comprising:

receiving the stream by the first contents transmitting device; and

selectively outputting, via the first digital interface of the first contents transmitting device, the compressed/expanded digital signal to the first contents receiving device responsive to the integrated revocation list received in the stream.

20. (New) A revocation information transmission method used in a system including a plurality of contents transmitting devices for transmitting contents, and a plurality of contents receiving devices for receiving contents on a network, the method comprising the steps of:

executing mutual authentication between the plurality of contents transmitting devices and the plurality of contents receiving devices, respectively, each of the contents transmitting devices reading authentication information of a respective one of the contents receiving devices;

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individually uploading revocation information including key information of mutual authentication failure from each of the contents transmitting devices or each of the contents receiving devices in case of mutual authentication failure to a revocation integrator that is separate from the plurality of contents transmitting devices and the plurality of contents receiving devices;

integrating, with the revocation integrator, the revocation information from each of the contents transmitting devices with the revocation information from each of the contents transmitting devices, as an integrated revocation list representing a common list of revocations for the contents receiving devices and the contents transmitting devices on the network;

packetizing the integrated revocation list and multiplexing the packetized revocation list into a stream; and

transmitting the stream to the contents transmitting devices on the network,

wherein the stream is an MPEG transport stream, and the integrated revocation list is

1) transmitted by using a data structure of a section of the MPEG transport stream,

2) transmitted by using a payload of transport packet of the MPEG transport stream, and

3) transmitted by using an IP packet.